

REMARKS ON COLOBATHRISTIDÆ WITH DESCRIPTIONS OF TWO NEW GENERA

by **E. Bergroth**

In 1835 BURMEISTER founded the genus *Colobathristes* on three Brazilian species, placing it in the family *Coreidæ* near *Alydus*. The genus remained unknown to AMYOT and SERVILLE (1843), SPINOLA (1850) and DALLAS (1852); and was not mentioned in the literature until 1865, when STÅL transferred it to the family *Myodochidæ*, evidently on account of the reduced number of the veins in the membrane, and founded upon it a subfamily by itself. In 1888 DISTANT redescribed one of BURMEISTER'S species under a new generic and specific name, assigning to it practically the same systematic place as did BURMEISTER but overlooking the description of the German author apparently because it did not occur to him to look for the genus among the *Myodochidæ* where STÅL had placed it (1). The synonymy of this insect was later pointed out by BREDDIN and HORVATH, both of whom followed STÅL in regarding this group as belonging to the *Myodochidæ*. Since 1903 many new genera and species of these insects have been described, particularly by HORVATH who has published an excellent monograph on them. BURMEISTER'S and DISTANT'S mistake as to the systematic place of the group — if it really is a mistake — is at any rate very pardonable, and if these insects are united with any of the old families, they ought in my opinion to be referred to the *Coreidæ*, not to the *Myodochidæ*. The same is true of the *Berytidæ* which some authors place in the *Myodochidæ*. In the *Colobathristidæ* and *Berytidæ*, as in the *Coreidæ*, the antennæ are inserted above a line uniting the middle of the eye with the base of the rostrum; in the *Myodochidæ* they are inserted below this line. The difference is that the *Coreidæ* have an antenniferous tubercle, whereas in the *Colobathristidæ* and *Berytidæ* the base of the antennæ is surrounded by an elevated chitinous ring. In the *Colobathristidæ* and *Berytidæ* the outer apical angle of the corium is narrowly prolonged beyond the middle of the membrane, a feature unknown in the *Myodochidæ*. The female genital apparatus of the *Colobathristidæ* is very different from that of the *Myodochidæ* and more similar to the female genitalia of some *Coreidæ*. It seems to me that these characters more than outweigh the reduced number of the membranal veins. The *Colobathristidæ*

(1) For *Colobathristidæ* DISTANT later (1903) mistook a genus of the *Myodochidæ* subfamilies *Malcinæ* and *Heterogastrinæ* respectively.

have much in common with the *Berytidae* and seem to be an offspring of them or are at least more related to them than to any other group of the Heteroptera. In my opinion there is every reason to elevate both the *Colobathristidae* and the *Berytidae* to family rank.

In the *Coreidae*, *Pyrrhocoridae* and many groups of the *Myodochidae* there is on either side near the middle base of the second and third (or at least the second) ventral segment a group of small glandular spots, the exact nature of which is unknown. Their number is usually three in each group, but sometimes there are four. Each spot bears an exserted sensorial hair which easily comes off and is present only in well preserved specimens. No or little attention has hitherto been paid to them by writers on systematic Hemipterology, but their number and position to each other do in many cases offer good specific and even generic characters. As they are present also in the *Colobathristidae*, I have mentioned them in the descriptions of the new genera given below. — To the family characters should be added: *Bucculae nullae vel rudimentariae*. *Pedes antici et postici subcontigui, medii leviter distantes*.

14 genera and 59 species are hitherto known of this family, 8 of the genera being monotypical. Their geographical distribution is very remarkable. They are strictly tropical insects and their centre of distribution in the Old World is New Guinea, in the New World the high plateaus of Peru and Bolivia. No species has yet been found west of Birma nor in Ceylon, the Hemipterous fauna of which is now fairly well known. In Africa they are totally missing and no species can be expected to occur there. As they are rather large and conspicuous insects, very many of them cannot have been overlooked in countries outside their now known geographical limits and these limits will probably not have to be extended much through future explorations, although sundry new forms will doubtless still be detected. Even a moderate knowledge of what family or families of plants serve these insects for food would possibly throw some light on their distribution, but unfortunately almost nothing is known on this point. One species is reported to have been injurious to the sugar-plantations in Java, but whether *Saccharum* is the original food-plant of this species seems doubtful. No genus is common to the New and Old World, but the genera of one hemisphere do not form a group sharply separated from those of the other, barely showing generic differences.

In one neotropical genus, represented by nine species, there is a marked dimorphism in the males. This dimorphism is of a most singular and bewildering nature and unique among the Heteroptera. In this genus the normal males have longer antennæ than the

females and the abdomen is quite differently shaped and coloured than in the opposite sex, but of the same species we find gynæcomorphous males with the antennæ of the same length as in the females and the abdomen structured and coloured as in the females; the male genital segments in both forms are identical. It would be of great interest to know if the internal male genital organs are developed in the gynæcomorphous males, but this question can be cleared up only by entomologists disposing of material preserved in alcohol.

The colour-variability in some species and the inconstancy in the forming of certain plastic characters in other species seem to indicate that the *Colobathristidæ* are of comparatively late geological origin and they have probably come into existence after the submersion of the land-bridge between northern South America and Africa, but before the land-connection between New Guinea and South America was sunken.

The maps appended to the end of this paper will give a survey of the geographical distribution of the *Colobathristidæ*, displaying the number of species represented in the several countries and islands.

Molybditis nov. gen.

(*μολύβδιτις* = like lead)

Corpus robustum. Caput vix exsertum, e supero visum ante oculos breviter triangulariter productum, e latere visum ante antennis leviter rotundatum et fortiter declive sed non verticale, altitudini basali subæque longum, lateribus haud carinatis, vertice inter ocellos sulco brevi profundo ante ocellos vix producto et utrinque mox extra et pone ocellum puncto transverso profundo instructo, gula horizontali, oculis sessilibus, ab apice pronoti parum remotis, ocellis majusculis, a basi capitis paullo remotis, ab oculis quam inter se paullo longius distantibus, rostro coxas medias paullum superante, articulo primo apicem prosterni paullulum superante, quarto tertio paullo longiore. Pronotum antrorsum fortiter declive et modice angustatum, basi capite saltem $\frac{1}{3}$ latius, lateribus ante medium leviter sinuatis, impressione transversa parum profunda, lobo postico antico circiter duplo longiore. Margo posticus propleuræ late leviter bisinuatus. Scutellum medio transversim elevatum, apice spina longa suberecta armatum. Hemelytra abdomine angustiora (♀), corio area anteapicali triangulari æquilatera majuscula haud coriacea instructo, venis corii crassiusculis, venis membranæ distinctis, extima ante medium furcata. Abdomen (♀) segmento primo lateribus parallelum, deinde usque ad apicem segmenti tertii sensim

dilatatum, subinde apicem versus rotundato-angustatum, segmento ultimo dorsali (sine connexivis) apicem versus angustato, latitudine sua paullo brevior, margine apicali truncato, segmento tertio ventrali secundo fere dimidio longiore et segmentis tribus ultimis unitis paullo brevior, ultimo lateribus quam medio duplo longiore, margine apicali utrinque late sinuato, disco segmenti secundi et tertii utrinque paullo pone basin maculis tribus parvis glandularibus subcontiguïs in lineam transversam subcurvatam ordinatis instructo, his maculis pilo sensorio exserto caduco præditis, maculis segmenti tertii a medio segmenti quam a latere minus remotis; apparatus genitalis haud exsertus. Femora antica subtus ante apicem spina obliqua armata; tibiæ anticæ inermes, femoribus æquilongæ, mediæ femoribus paullo longiores, posticæ femoribus multo longiores, tibiæ omnes præsertim apicem versus setulis semierectis rigidis subspiniiformibus vestitæ; articulus primus tarsorum posteriorum articulis apicalibus unitis $2/3$ longior.

Allied to *Taphrocranium* HORV., but the head is somewhat differently structured and sculptured, the eyes are not stylated, the rostrum is longer and the structure of the abdomen is different. In his description of *Taphrocranium* HORVATH says: « vertice ante ocellos sulco mediano distincto instructo ». BREDDIN in his description of the typical species, *T. robustum* BREDD., says: « zwischen ihnen [the ocelli] eine schmale Längsfurche, die hinten in einem starken Punkteindruck endigt ». Neither is the case in *Molybditis*, where the furrow is *between* the ocelli but of the same depth and breadth throughout and scarcely extending beyond a line uniting the anterior ends of the rather large ocelli.

Molybditis Horvathi n. sp.

Ventre dense sed brevissime et subtilissime albido-sericeo excepto glabra, plumbeo-nigra, abdomine fusco-nigro, antennis et pedibus piceo-nigris, rostro (articulo primo piceo excepto) testaceo, margine laterali-apicali scutelli, fascia lata basali segmenti tertii dorsi abdominis, fasciola brevi apicali dorsali segmenti tertii et quarti abdominis, connexivi superioris et inferioris segmento secundo medio, duabus tertiis partibus basalibus segmenti tertii, plus quam dimidio basali segmenti quarti et quinti segmentoque sexto apice excepto, macula magna media segmenti tertii ventris, coxis et trochanteribus omnibus metatarsoque postico pallide flavidis, spina scutelli basin versus piceo-testacea. Caput impunctatum, antennis breviter albo-setulosis, articulo primo glabro, medium pronoti superante, apice distincte incrassato, secundo primo longiore et tertio brevior (art. quartus deest), articulo secundo rostri tertio

distincte brevior. Pronotum latitudine sua $1/4$ longius, cum parte plus quam dimidia posteriore propleuræ modice dense punctulatum, lobo antico cum parte ejus pleurali vix punctulato. Mesosternum medio area parcius punctolata præditum, utrinque inter acetabula coxasque antica et media late impunctatum. Metasternum impunctatum. Meso- et metapleuræ minus dense profunde punctatæ. Hemelytra abdomine paullo breviora, subvirescenti-hyalina, basi fusco-nigra, venis corii fuscis, costa (apice fusco excepto) viridi, membrana basi majuscula transversa fusca notata et apice fusco-umbrata, venis subdecoloribus, extima circa furcaturam fusca. Alæ medium segmenti quarti abdominis superantes, levissime umbratæ, ad apicem cellule macula oblongula fusca notatæ, venis testaceis. Abdomen impunctatum. Femora glabra. Long. ♀ 10.5 mill.

Borneo (Sarawak).

Monographo præstantissimo hujus familiæ dicata.

Centromus nov. gen.

(*κεντρον* = spine; *ωμος* = shoulder).

Corpus gracile, tipuliforme. Caput distincte exsertum, ante antennas valde declive sed haud verticale, e latere visum antice oblique truncatum, altitudini basali subæque longum, lateribus non carinatis, vertice sulco longitudinali basali latiusculo profundissimo ante ocellos longius extenso et medium verticis fere attingente atque utrinque extra ocellum impressione rotundata ocello multo majore instructo, gula horizontali, oculis ab apice pronoti nonnihil distantibus, breviter stylatis, stylo paullo retrorsum vergente, ocellis perminutis, ad basin capitis sitis, ab oculis quam inter se dimidio longius remotis, rostro coxas anticas subsuperante, articulo primo medium oculorum haud attingente, quarto tertio subæquilongo, antennis corpore multo longioribus, articulo quarto tertio multo longiore. Pronotum antrorsum modice declive et leviter angustatum, basi capiti subæque latum, lateribus ante medium levissime sinuatis, impressione transversa profunda, medio interrupta, anulo collari brevissimo, lobo antico capite sat multo altiore, lobo postico antico plus quam duplo longiore, supra angulos humerales spina longa sursum et paullo extrorsum directa armato. Margo posticus propleuræ rectus. Scutellum spina longissima semierecta armatum. Hemelytra abdomini æque lata (♀), corio area anteapicali triangulari subæquilatera latiuscula haud coriacea instructo, venis membranæ distinctis, extima ante medium furcata. Abdomen (♀) segmento primo lateribus parallelum, deinde usque ultra

medium segmenti tertii leviter subrotundato-dilatatum, subinde usque ad basin segmenti ultimi leviter rotundato-angustatum, segmento ultimo dorsali (sine connexivis) parallelo, latitudine sua paullo longiore, margine apicali subrecto, segmento tertio ventrali secundo fere dimidio longiore et segmentis tribus ultimis unitis subæquilongo, ultimo lateribus quam medio duplo longiore, margine apicali medio breviter angulato-producto, disco segmenti secundi et tertii utrinque paullo pone basin maculis tribus parvis glandularibus in triangulum ordinatis instructo, his maculis pilum sensorium exsertum caducum gerentibus, maculis segmenti tertii a medio segmenti quam a lateribus paullo magis remotis; apparatus genitalis exsertus. Femora antica subtus ante apicem spina obliqua armata; tibiæ anticæ inermes, femoribus breviores, mediæ femoribus parum breviores, posticæ femoribus multo longiores; articulus primus tarsorum posticorum articulis ultimis unitis fere triplo longior.

Allied to the preceding genus, but abundantly distinct by the structure of the head and pronotum, the stylated eyes, the much shorter rostrum, the differently shaped last female dorsal segment, the position of the ventral glandular spots, the different length of the fore and middle tibiæ and the much longer metatarsus of the hind legs. It differs from all hitherto known genera of this family by having the pronotum armed with a long slender suberect spine near the humeral angles.

Centromus trispinosus n. sp.

Plumbeo-niger, scutello holosericeo-atro, spina ejus fusca, abdomine testaceo, dorso ejus et vitta sublaterali ventris fuscis, segmento primo ventris secundoque basin versus nigricantibus, connexivo toto supra et subtus pallide testaceo, antennis fuscis, articulo earum ultimo, rostro pedibusque obscure testaceis, coxis piceis, hemelytris pellucidis, levissime umbratis, basi corii clavique ac macula subtriangulari basali membranæ fuscis, venis corii testaceis, capite, pronoto pleurisque tomento adpresso niccolo-sericeo indutis, pronoto præterea longe exserte parcius albo-piloso, spinis pronoti et spina scutellari longe radiatim albo-pilosis. Antennæ gracillimæ, subglabræ, articulo primo basin pronoti superante, apice paullo incrassato, secundo primo subæquilongo et tertio paullo brevior. Rostrum breviter pilosum, articulo secundo adjacentibus duobus distincte brevior. Pronotum latitudine sua $1/3$ longius, lobo antico cum parte ejus pleurali vix punctulato, lobo postico cum dimidio posteriore propleuræ ac meso- et metapleura totis minus dense profunde punctatis; meso- et metasternum medio parcius punctulata,

illo utrinque inter acetabula antica et media vitta impunctata prædito. Hemelytra (♀) medium segmenti penultimi dorsalis superantia. Abdomen læve. Femora subtus parcius suberecte pilosa; tibiæ breviter albo-setulosæ. Long. ♀ 10.5 millim.

Borneo (Sarawak).

During the examination of this insect the head was detached from the body and in repairing it I was unable to fasten the head in a quite natural position. I deem it necessary to state this as the position of the ocelli and the length of the rostrum is the type as now prepared do not quite fit the description which is, however, correct having been made before the accident occurred.

The genera above described were among a number of Hemiptera communicated to me for determination by Mr. J. C. MOULTON, Curator of the Sarawak Museum.

Symphylax sp.

A mutilated specimen (without abdomen) from Baram, Sarawak agrees fairly well with the description of the var. *confluens* HORV. of *S. picticollis* HORV., but the rostrum is shorter, only reaching the middle coxæ, and between the anteapical spine and the apex of the fore femora there are two minute spinules not mentioned in the description. Possibly not distinct from *picticollis*.

Colobathristes facetus HORV.

To this species, described from a single ill-preserved, unlocalized and mutilated specimen (without abdomen), I refer a specimen from French Guiana in my collection. It differs from the description in having the pile of the head and pronotum golden yellow (not white). The abdomen is testaceous with the dorsum laterally infuscated; the connexivum, except its outer third, is blackish above; the suture between the venter and the connexivum is irregularly infuscated; the three subbasal glandular spots of the second segment are placed in a triangle, those of the third segment in a slightly curved oblique line.



